

CLAIMS

1. A method for operating a mobile electronic device within an automobile having an on-board computer, comprising:

receiving, at the on-board computer, a wireless identification message from the mobile electronic device located within the automobile;

communicating reconfiguration instructions from the on-board computer to the mobile electronic device; and

reconfiguring the mobile electronic device as a slave device to the on-board computer in accordance with the reconfiguration instructions.

2. The method of claim 1, wherein the mobile electronic device is selected from a mobile telephone, a handheld personal computer, a personal organizer, a palmtop computer, a computerized notepad, a global positioning system (GPS), an electronic video game, a video player, a personal digital assistant or combinations thereof.

3. The method of claim 1, wherein the mobile electronic device comprises a wireless transceiver for transmitting and receiving wireless signals selected from radio frequency and infrared signals.

4. The method of claim 1, wherein the step of receiving the wireless identification message further comprises:

transmitting a discovery signal on a discovery frequency from the on-board computer;

receiving the discovery signal at the mobile electronic device; and

interpreting the discovery signal to be an identification request from the on-board computer, wherein the message contains information describing the mobile electronic device, an address for the mobile electronic device, and an address for each of the one or more features within the mobile electronic device.

5. The method of claim 1, further comprising:

storing, within the on-board computer, an address for the mobile electronic device, and an address for each of the one or more features within the mobile electronic device,

monitoring by the mobile electronic device for messages to the address for the mobile electronic device,

5 monitoring by the on-board computer for messages from the address for the mobile electronic device.

6. The method of claim 1, wherein the one or more features within the mobile electronic device are selected from transceiver, speaker, microphone, keypad, video display, joystick,
10 memory, transmitter, receiver, antenna or combinations thereof.

7. The method of claim 6, further comprising utilizing one or more features within the on-board computer instead of the one or more disabled features within the mobile electronic device.

8. The method of claim 7, further comprising:

obtaining data, using the on-board computer, about the status of conditions affecting the automobile; and

determining, using the on-board computer, which of the one or more features within the on-board computer to make available to a motorist.

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9. The method of claim 8, wherein the conditions are measured conditions selected from weather outside the automobile, speed of the automobile, braking frequency, distance to other vehicles, engine RPM, engine coolant level and temperature, steering wheel movement, automobile's acceleration and braking, frequency of automobile's acceleration and braking, time
25 of day, time period of driving without a rest stop or combinations thereof.

10. The method of claim 9, wherein the conditions are deduced conditions selected from traffic density, presence of a passenger, motorist fatigue or combinations thereof.

11. The method of claim 9, wherein the step of determining the features to make available to the motorist further comprises:

defining a normal value for each of the conditions and combinations of the conditions;

storing the normal value in a database of the on-board computer;

5 storing instructions in the database of the on-board computer for removing availability of the features based upon a variance between the normal condition and an actual condition and combinations of actual conditions;

determining a variance between the normal conditions and the actual conditions; and

removing availability of the features based upon the instructions.

10 12. The method of claim 12, wherein the mobile electronic device is a mobile telephone and wherein the instructions are selected from refusal to accept a mobile telephone call, refusal to place a mobile telephone call, placing only emergency mobile telephone calls, limiting the duration of a mobile telephone call, limiting the frequency of mobile telephone calls, limiting motorist input only to voice commands, blocking output to the automobile's visual display device or combinations thereof.

15 13. The method of claim 8, wherein the step of obtaining data, using the on-board computer, about the status of conditions affecting the automobile, further comprises:

20 accessing a driving history database to obtain data about driving conditions.

14. The method of claim 13, further comprising:

determining the vehicle location using a global positioning system; and

25 obtaining driving conditions from the driving history database associated with the vehicle location.

15. The method of claim 14, wherein the driving conditions are selected from road hazards, accident frequency, propensity for accidents, visibility, curves, and combinations thereof.

30 16. The method of claim 1, further comprising:

allowing the mobile telephone to simultaneously use features of the mobile telephone and features of the automobile.

17. A system for operating a mobile electronic device within an automobile having an on-board computer, comprising:

a mobile electronic device,

an on-board computer mounted in an automobile,

an address for the mobile electronic device,

an address for one or more features within the mobile electronic device, wherein the mobile electronic device communicates wirelessly with the on-board computer, and wherein the mobile electronic device reconfigures itself as a slave device to the on-board computer.

18. The system of claim 17, wherein the mobile electronic device is selected from a mobile telephone, a handheld personal computer, a personal organizer, a palmtop computer, a computerized notepad, a global positioning system (GPS), an electronic video game, a video player, a personal digital assistant or combinations thereof.

19. The system of claim 17, wherein the mobile electronic device comprises a wireless transceiver for transmitting and receiving wireless signals selected from radio frequency and infrared signals.

20. The system of claim 17, wherein the one or more features within the mobile electronic device are selected from transceiver, speaker, microphone, keypad, video display, joystick, memory, transmitter, receiver or combinations thereof.

21. The system of claim 20, further comprising utilizing one or more features within the on-board computer instead of the one or more disabled features within the mobile electronic device.

22. The system of claim 17, further comprising:

a database in a memory of the on-board computer containing normal values for conditions and combinations of conditions affecting the automobile and

a database of instructions for removing the availability of the features based upon a variance between the normal values and an actual condition and combinations of actual conditions, wherein the variance is determined and wherein a motorist is denied access to the one or more features based upon the instructions.

23. The system of claim 22, wherein the conditions are measured conditions selected from weather outside the automobile, speed of the automobile, braking frequency, distance to other vehicles, engine RPM, engine coolant level and temperature, steering wheel movement, automobile's acceleration, frequency of automobile's acceleration, time of day, time period of driving without a rest stop or combinations thereof.

24. The system of claim 22, wherein the conditions are deduced conditions selected from traffic density, presence of a passenger, motorist fatigue or combinations thereof.

25. The system of claim 22, wherein the mobile electronic device is a mobile telephone and wherein the instructions are selected from refusal to accept a mobile telephone call, refusal to place a mobile telephone call, placing only emergency mobile telephone calls, limiting the duration of a mobile telephone call, limiting the frequency of mobile telephone calls, limiting motorist input only to voice commands, blocking output to the automobile's visual display device or combinations thereof

26. A computer program product including instructions embodied on a computer readable medium, the instructions comprising:

receiving instructions for receiving, at the on-board computer, a wireless identification message from the mobile electronic device located within the automobile;

communicating instructions for communicating reconfiguration instructions from the on-board computer to the mobile electronic device; and

reconfiguring instructions for reconfiguring the mobile electronic device as a slave device to the on-board computer.

27. The computer program product of claim 26, wherein the mobile electronic device is selected from a mobile telephone, a handheld personal computer, a personal organizer, a palmtop computer, a computerized notepad, a global positioning system (GPS), an electronic video game, a video player, a personal digital assistant or combinations thereof.

28. The computer program product of claim 26, wherein the mobile electronic device system comprises a wireless transceiver and for transmitting and receiving wireless signals selected from radio frequency and infrared.

29. The computer program product of claim 26, wherein the receiving instructions for the step of receiving the wireless identification message further comprises:

transmitting instructions for transmitting a discovery signal on a discovery frequency by the on-board computer;

receiving instructions for receiving the discovery signal by the mobile electronic device;

interpreting instructions for interpreting the discovery signal to be an identification request by the on-board computer; and

transmitting instructions for transmitting the wireless identification message to the on-board computer, wherein the message contains information describing the mobile electronic device, an address for the mobile electronic device, and an address for each of the one or more features within the mobile electronic device.

30. The computer program product of claim 26, further comprising:

storing instructions for storing, within the on-board computer, an address for the mobile electronic device, and an address for each of the one or more features within the mobile electronic device;

monitoring instructions for monitoring at the mobile electronic device for messages to the address for the mobile electronic device; and

monitoring instructions for monitoring at the on-board computer for messages from the assigned address for the mobile electronic device.

31. The computer program product of claim 26, wherein the one or more features within the mobile electronic device are selected from transceiver, speaker, microphone, keypad, video display, joystick, memory, transmitter, receiver or combinations thereof.

32. The computer program product of claim 31, wherein one or more features within the on-board computer provide substitute functions of the one or more disabled features within the mobile electronic device.

33. The computer program product of claim 32, further comprising:
obtaining instructions for obtaining data, using the on-board computer, about the status of conditions affecting the automobile; and

determining instructions for determining, using the on-board computer, which of the one or more features within the on-board computer to make available to a motorist.

34. The computer program product of claim 33, wherein the conditions are measured conditions selected from weather outside the automobile, speed of the automobile, braking frequency, distance to other vehicles, engine RPM, engine coolant level and temperature, steering wheel movement, automobile's acceleration, frequency of automobile's acceleration, time of day, time period of driving without a rest stop and combinations thereof.

35. The computer program product of claim 34, wherein the conditions are deduced conditions selected from traffic density, presence of a passenger, motorist fatigue and combinations thereof.

36. The computer program product of claim 33, wherein the determining instructions for determining of the features to make available to the motorist further comprises:

defining instructions for defining a normal value for each of the conditions and combinations of the conditions;

storing instructions for storing the normal value in a database of the on-board computer;

storing instructions for storing application instructions in a database of the on-board computer for removing the availability of the features based upon a variance between the normal conditions and an actual condition and combinations of actual conditions;

determining instructions for determining the variance between the normal conditions and the actual conditions; and

removing instructions for removing the availability of the features based upon the application instructions.

37. The computer program product of claim 36, wherein the mobile electronic device is a mobile telephone and wherein the application instructions are selected from refusal to accept a mobile telephone call, refusal to place a mobile telephone call, placing only emergency mobile telephone calls, limiting the duration of a mobile telephone call, limiting the frequency of mobile telephone calls, limiting motorist input only to voice commands, blocking output to the visual display device or combinations thereof.

38. A method for controlling operation of a mobile telephone within an automobile having an on-board computer, comprising:

transmitting a wireless discovery signal from a transmitter controlled by the on-board computer;

receiving a wireless identification message from the mobile telephone;

establishing a wireless communication link between the on-board computer and the mobile telephone;

communicating instructions from the on-board computer to the mobile telephone to disable one or more features within the mobile telephone; and

communicating reconfiguration instructions from the on-board computer to the mobile telephone, whereby the mobile telephone reconfigures itself to become a slave device to the on-board computer.

39. The method of claim 38, wherein the one or more features disabled within the mobile telephone are selected from a speaker, a microphone, a display, a keypad, antenna or combinations thereof.

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40. The method of claim 39, further comprising utilizing one or more features within the on-board computer to provide substitute functions for the one or more disabled features of the mobile telephone.

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41. The method of claim 40, further comprising:
obtaining data, using the on-board computer, about the status of conditions affecting the automobile; and
determining, using the on-board computer, which of the one or more features within the on-board computer to make available to a driver of the automobile.

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42. The method of claim 38, wherein the wireless identification message contains information describing the mobile telephone, and address for the mobile telephone, and an address for each of the one or more features within the mobile telephone.

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43. The method of claim 1, further comprising:
communicating instructions from the on-board computer to the mobile electronic device to disable one or more features within the mobile electronic device.

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44. The computer program product of claim 26, further comprising:
communicating instructions for communicating instructions from the on-board computer to the mobile electronic device to disable one or more features within the mobile electronic device;